

What is claimed is:

1 1. A wide-angle, single focus lens comprising four lenses of negative, positive, negative, and
2 positive refractive power, in sequential order from the object side, wherein:

3 the first lens is concave on the object side;

4 the second lens has at least one surface that is aspheric;

5 the fourth lens is convex on the image side and has at least one of its surfaces aspheric;

6 and

7 the following conditions are satisfied

8
$$-2.0 < f / f_1 < -0.5$$

9
$$0.5 < f / f_2 < 2.0$$

10
$$0.5 < f / f_4 < 2.0$$

11 where

12 f is the focal length of the wide-angle, single focus lens,

13 f₁ is the focal length of the first lens in order from the object side,

14 f₂ is the focal length of the second lens in order from the object side, and

15 f₄ is the focal length of the fourth lens, in order from the object side.

1 2. The wide-angle, single focus lens as described in Claim 1, wherein the first, third and fourth
2 lenses are each formed of a single lens element and the following conditions are also satisfied:

3
$$N_d1 < 1.65$$

4
$$N_d3 > 1.70$$

5 $N_d4 < 1.65$

6 $v_d3 < 50$

7 $v_d4 > 50$

8 where

9 N_d1 is the index of refraction, at the d line, of the first lens element,

10 N_d3 is the index of refraction, at the d line, of the third lens element,

11 N_d4 is the index of refraction, at the d line, of the fourth lens element,

12 v_d3 is the Abbe number, at the d line, of the third lens element, and

13 v_d4 is the Abbe number, at the d line, of the fourth lens element.

3. A wide-angle, single focus lens comprising four lenses of negative, positive, negative, and positive refractive power, in sequential order from the object side, wherein:

the first lens in order from the object side is concave on the object side;

the second lens in order from the object side has at least one surface that is aspheric; and

the fourth lens in order from the object side is convex on the image side and has at least one surface that is aspheric.

4. The wide-angle, single focus lens as described in Claim 3, wherein the following condition is satisfied:

3 $-2.0 < f / f_1 < -0.5$

4 where

5 f is the focal length of the wide-angle, single focus lens, and

6 f_1 is the focal length of the first lens in order from the object side.

1 5. The wide-angle, single focus lens as described in Claim 3, wherein the following condition is
2 satisfied:

3 $0.5 < f / f_2 < 2.0$

4 where

5 f is the focal length of the wide-angle, single focus lens, and

6 f_2 is the focal length of the second lens in order from the object side.

1 6. The wide-angle, single focus lens as described in Claim 3, wherein the following condition is
2 satisfied:

3 $0.5 < f / f_4 < 2.0$

4 where

5 f is the focal length of the wide-angle, single focus lens, and

6 f_4 is the focal length of the fourth lens in order from the object side.